

## Claims

[1] A vehicle-mounted display apparatus including a cabinet having a display unit, and a supporting base which is a member combined with said cabinet and which is secured to an arbitrary position, characterized in that said vehicle-mounted display apparatus comprises:

an attitude setting mechanical unit for, when combining said cabinet and said supporting base, enabling determination of a rotational attitude of one of them with respect to the other one for each of a plurality of positions;

a mounting and demounting mechanical unit for combining said cabinet and said supporting base so that said cabinet can be mounted to and demounted from said supporting base; and

an operating mechanical unit for holding the combination of said cabinet and said supporting base, and for canceling the combination of them.

[2] The vehicle-mounted display apparatus according to Claim 1, characterized in that an axial member is disposed in one of said cabinet and said supporting base and a convex portion with rotational symmetry is formed in an outer surface of this axial member, and a fitting hole into which said axial member can be fitted is disposed in the other one of said cabinet and said supporting base and a concave portion with rotational symmetry which is engaged with said convex portion is formed in an inner surface of this fitting hole.

[3] The vehicle-mounted display apparatus according to Claim 2, characterized in that said axial member and an operation means for causing said axial member to reciprocate are disposed in said cabinet, and said fitting hole is disposed in said supporting base.

[4] The vehicle-mounted display apparatus according to Claim 3, characterized in that said axial member is two regular polygonal prisms which are slidably supported by said cabinet, and which are arranged at an interval and in an identical center line, and said fitting hole member is holes each having a shape into which a corresponding one of said regular polygonal prisms can be fitted, and characterized in that said operation means causes said two regular polygonal prisms to open along said identical axis line and in a direction of an outer side of said cabinet in response to a manipulation of an operating member and also causes said two regular polygonal prisms to close in a direction of an inner side of said cabinet using a pressing means, and includes stoppers for restricting movements of said regular polygonal prisms which are caused by this pressing means and a movement transferring means for transferring a movement of said operating member to said axial member.

[5] The vehicle-mounted display apparatus according to Claim 2, characterized in that said axial member is disposed in said cabinet and said fitting hole is disposed in said supporting base, and said axial member includes a pressing and holding means for pressing and holding said convex portion in a state in which said convex portion is protruding from the outer surface of said axial member, and for holding said convex portion so that it can move in a direction of an inner side of said outer surface of said axial member.

[6] The vehicle-mounted display apparatus according to Claim 5, characterized in that said pressing and holding means includes a container for accommodating said convex portion so that it can protrude from and retract into said axial member, an elastic member for pressing said convex portion in an outward

direction of said axis, and a stopping member for restricting movements of said convex portion which caused by this elastic member.

[7] The vehicle-mounted display apparatus according to Claim 5 6, characterized in that said convex portion has an end part which is spherical in shape.

[8] The vehicle-mounted display apparatus according to Claim 5, characterized in that said cabinet has a plurality of attaching portions, to either of which said axial member is 10 attached, at a plurality of positions thereof.

[9] The vehicle-mounted display apparatus according to Claim 3, characterized in that said vehicle-mounted display apparatus comprises a plurality of cabinets each of which is said cabinet and a plurality of supporting bases each of which is said 15 supporting base.

[10] A vehicle-mounted display apparatus including a cabinet having a display unit, and a supporting base which is a member combined with said cabinet and which is secured to an arbitrary position, characterized in that said vehicle-mounted display 20 apparatus comprises:

an attitude setting mechanical unit for, when combining said cabinet and said supporting base, determining a rotational attitude of one of them with respect to the other one for each of a plurality of positions;

25 a first mounting and demounting mechanical unit for combining said cabinet and said supporting base so that said cabinet can be mounted to and demounted from said supporting base;

a first operating mechanical unit for holding the 30 combination of said cabinet and said supporting base, and for

canceling the combination of them;

a second mounting and demounting mechanical unit for combining said cabinet and the display unit so that the display unit can be mounted to and demounted from said cabinet; and

5 a second operating mechanical unit for holding the combination of said cabinet and said display unit, and for canceling the combination of them.

[11] The vehicle-mounted display apparatus according to Claim 10, characterized in that an axial member and an operation means for causing said axial member to reciprocate are disposed in said cabinet, and a fitting hole into which said axial member can be fitted is disposed in said display unit.

[12] A vehicle-mounted display apparatus including a cabinet having a display unit, and a supporting base which is a member 15 combined with said cabinet and which is secured to an arbitrary position, characterized in that said vehicle-mounted display apparatus comprises:

an attitude setting mechanical unit for, when combining said cabinet and said supporting base, determining a rotational 20 attitude of one of them with respect to the other one for each of a plurality of positions;

a first mounting and demounting mechanical unit for combining said cabinet and said supporting base so that said cabinet can be mounted to and demounted from said supporting 25 base;

a first operating mechanical unit for holding the combination of said cabinet and said supporting base, and for canceling the combination of them;

a second mounting and demounting mechanical unit for 30 combining said cabinet and either the display unit or a

cartridge so that either the display unit or the cartridge can be mounted to and demounted from said cabinet with compatibility between the display unit and the cartridge being ensured;

5           a second operating mechanical unit for holding the combination of said cabinet and either said display unit or said cartridge, and for canceling the combination of them;

          a third mounting and demounting mechanical unit for combining said cartridge and a sound source device so that said  
10 sound source device can be mounted to and demounted from said cartridge; and

          a third operation mechanical unit for holding the combination of said cartridge and said sound source device, and for canceling the combination of them.

15 [13] The vehicle-mounted display apparatus according to Claim 12, characterized in that an axial member and an operation means for causing said axial member to reciprocate are disposed in said cabinet, and a fitting hole into which said axial member can be fitted is disposed in either said display unit or said  
20 cartridge.

[14] The vehicle-mounted display apparatus according to Claim 12, characterized in that the cartridge has an accommodating recess and a pressing means disposed in one of opposing surfaces of said accommodating recess, for pressing the sound source  
25 device which is inserted into said accommodating recess toward another one of said opposing surfaces.